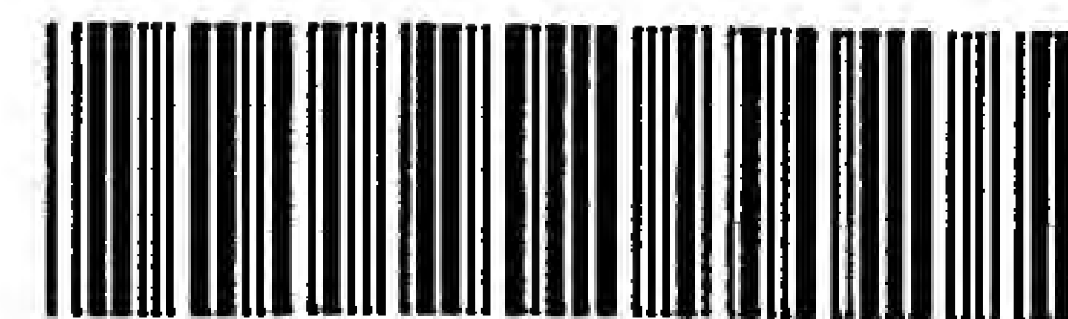# RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _09/743,823A_
Source: _1Fw/6_
Date Processed by STIC: _3/29/06_

ENTERED

IFW16

RAW SEQUENCE LISTING   DATE: 03/29/2006
PATENT APPLICATION: US/09/743,823A   TIME: 10:53:54

Input Set : A:\09743823.txt
Output Set: N:\CRF4\03292006\I743823A.raw

```
   3 <110> APPLICANT: Corrado FOGHER
   5 <120> TITLE OF INVENTION: SYNTHETIC POLYNUCLEOTIDE CODING FOR HUMAN LACTOFERRIN,
VECTORS,
   6       CELLS AND TRANSGENIC PLANTS CONTAINING IT
   8 <130> FILE REFERENCE: 4161-14 / X89727RVP
  10 <140> CURRENT APPLICATION NUMBER: 09/743,823A
  11 <141> CURRENT FILING DATE: 2001-08-22
  13 <150> PRIOR APPLICATION NUMBER: PCT/IT99/00226
  14 <151> PRIOR FILING DATE: 1999-07-19
  16 <150> PRIOR APPLICATION NUMBER: IT RM98A000478
  17 <151> PRIOR FILING DATE: 1998-07-17
  19 <160> NUMBER OF SEQ ID NOS: 26
  21 <170> SOFTWARE: MS Word
  23 <210> SEQ ID NO: 1
  24 <211> LENGTH: 2079
  25 <212> TYPE: DNA
  26 <213> ORGANISM: Artificial Sequence
  28 <220> FEATURE:
  29 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic human
lactoferrin
  31 <220> FEATURE:
  32 <221> NAME/KEY: CDS
  33 <222> LOCATION: (1)..(2076)
  35 <400> SEQUENCE: 1
  36 ggc cgt agg aga agg agt gtt caa tgg tgc gca gta tca caa cca gag    48
  37 Gly Arg Arg Arg Arg Ser Val Gln Trp Cys Ala Val Ser Gln Pro Glu
  38  1               5                   10                  15
  40 gcc aca aaa tgc ttc caa tgg caa agg aat atg aga aaa gtt cgt gga    96
  41 Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg Gly
  42              20                  25                  30
  44 cct cct gta tct tgc ata aag aga gat tca ccc atc cag tgt atc cag   144
  45 Pro Pro Val Ser Cys Ile Lys Arg Asp Ser Pro Ile Gln Cys Ile Gln
  46          35                  40                  45
  48 gca att gcg gaa aac aga gct gat gct gtg act ctt gat ggt ggt ttc   192
  49 Ala Ile Ala Glu Asn Arg Ala Asp Ala Val Thr Leu Asp Gly Gly Phe
  50      50                  55                  60
  52 ata tac gag gca gga ctt gcc cca tac aaa ctg cga cct gta gcg gcg   240
  53 Ile Tyr Glu Ala Gly Leu Ala Pro Tyr Lys Leu Arg Pro Val Ala Ala
  54  65                  70                  75                  80
  56 gaa gtc tac ggg acc gaa aga caa cca cga act cac tat tat gct gtg   288
  57 Glu Val Tyr Gly Thr Glu Arg Gln Pro Arg Thr His Tyr Tyr Ala Val
  58                  85                  90                  95
  60 gct gtt gtg aag aag ggc gga tct ttt cag ctg aac gaa ctt caa ggt   336
  61 Ala Val Val Lys Lys Gly Gly Ser Phe Gln Leu Asn Glu Leu Gln Gly
```

62   100   105   110

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 64 ctg aag tca tgc cac aca gga ctt cgc agg acc gct gga tgg aat gtc   384
 65 Leu Lys Ser Cys His Thr Gly Leu Arg Arg Thr Ala Gly Trp Asn Val
 66         115                 120                 125
 68 cct ata ggg aca ctt cgt cca ttc ttg aat tgg acg ggt cca cct gag   432
 69 Pro Ile Gly Thr Leu Arg Pro Phe Leu Asn Trp Thr Gly Pro Pro Glu
 70         130                 135                 140
 72 ccc att gag gca gct gtg gca aga ttc ttc tca gcc tct tgt gtt cca   480
 73 Pro Ile Glu Ala Ala Val Ala Arg Phe Phe Ser Ala Ser Cys Val Pro
 74 145                 150                 155                 160
 76 ggt gca gat aaa gga caa ttc ccc aac ctt tgt cgc ctg tgt gcg ggg   528
 77 Gly Ala Asp Lys Gly Gln Phe Pro Asn Leu Cys Arg Leu Cys Ala Gly
 78                 165                 170                 175
 80 aca ggg gaa aac aaa tgt gca ttc tca tcc cag gaa ccg tac ttc agc   576
 81 Thr Gly Glu Asn Lys Cys Ala Phe Ser Ser Gln Glu Pro Tyr Phe Ser
 82                 180                 185                 190
 84 tac tct ggt gcc ttt aag tgt ctt aga gac ggt gct gga gat gtt gct   624
 85 Tyr Ser Gly Ala Phe Lys Cys Leu Arg Asp Gly Ala Gly Asp Val Ala
 86                 195                 200                 205
 88 ttt att aga gag agc aca gtg ttt gag gat ctt tca gac gag gct gaa   672
 89 Phe Ile Arg Glu Ser Thr Val Phe Glu Asp Leu Ser Asp Glu Ala Glu
 90         210                 215                 220
 92 agg gac gag tat gag tta ctc tgc cca gac aac act cgt aag cca gtt   720
 93 Arg Asp Glu Tyr Glu Leu Leu Cys Pro Asp Asn Thr Arg Lys Pro Val
 94 225                 230                 235                 240
 96 gac aag ttc aaa gat tgc cat ctt gca cgg gtc cct tct cat gcc gtt   768
 97 Asp Lys Phe Lys Asp Cys His Leu Ala Arg Val Pro Ser His Ala Val
 98                 245                 250                 255
100 gtg gca cga agt gtt aat gga aag gag gat gcc atc tgg aat ctt ctc   816
101 Val Ala Arg Ser Val Asn Gly Lys Glu Asp Ala Ile Trp Asn Leu Leu
102                 260                 265                 270
104 cgc caa gca cag gaa aag ttt gga aag gac aag tca ccg aaa ttc cag   864
105 Arg Gln Ala Gln Glu Lys Phe Gly Lys Asp Lys Ser Pro Lys Phe Gln
106         275                 280                 285
108 ctc ttt ggt tcc cct agt ggg cag aaa gat ctt ctg ttc aag gac tct   912
109 Leu Phe Gly Ser Pro Ser Gly Gln Lys Asp Leu Leu Phe Lys Asp Ser
110         290                 295                 300
112 gcc att ggg ttt tcg aga gtg cca cct agg ata gat tct ggg ttg tac   960
113 Ala Ile Gly Phe Ser Arg Val Pro Pro Arg Ile Asp Ser Gly Leu Tyr
114 305                 310                 315                 320
116 ctt ggc tcc gga tac ttt act gca att cag aac ttg agg aaa agt gag  1008
117 Leu Gly Ser Gly Tyr Phe Thr Ala Ile Gln Asn Leu Arg Lys Ser Glu
118                 325                 330                 335
120 gag gaa gtt gct gcc cgg cgt gcg cgg gtc gtt tgg tgt gcg gtg gga  1056
121 Glu Glu Val Ala Ala Arg Arg Ala Arg Val Val Trp Cys Ala Val Gly
122                 340                 345                 350
124 gag caa gag ttg cgc aag tgt aac cag tgg agt ggt ttg agc gaa gga  1104
125 Glu Gln Glu Leu Arg Lys Cys Asn Gln Trp Ser Gly Leu Ser Glu Gly
126                 355                 360                 365
128 tct gtg acc tgc tca tcg gcc tcc act aca gaa gat tgc atc gcc ctg  1152
```

```
129 Ser Val Thr Cys Ser Ser Ala Ser Thr Thr Glu Asp Cys Ile Ala Leu
130     370             375             380
132 gtg ttg aaa gga gaa gct gat gcc atg agt ttg gat gga gga tat gtt    1200
133 Val Leu Lys Gly Glu Ala Asp Ala Met Ser Leu Asp Gly Gly Tyr Val
134 385             390             395             400
136 tac act gca ggt aaa tgt ggt ttg gtg cct gtc ctt gca gag aac tac    1248
137 Tyr Thr Ala Gly Lys Cys Gly Leu Val Pro Val Leu Ala Glu Asn Tyr
138             405             410             415
140 aaa tca caa caa agc agt gac cct gat cct aac tgt gtg gat aga cct    1296
141 Lys Ser Gln Gln Ser Ser Asp Pro Asp Pro Asn Cys Val Asp Arg Pro
142             420             425             430
144 gtg gaa gga tat ctt gct gtg gcg gtg gtt agg aga tca gac act agc    1344
145 Val Glu Gly Tyr Leu Ala Val Ala Val Val Arg Arg Ser Asp Thr Ser
146             435             440             445
148 ctt acc tgg aac tct gtg aaa ggc aag aag tcc tgc cac acc gcc gtg    1392
149 Leu Thr Trp Asn Ser Val Lys Gly Lys Lys Ser Cys His Thr Ala Val
150     450             455             460
152 gac agg act gca ggt tgg aat atc ccc atg gga ttg ctc ttc aac cag    1440
153 Asp Arg Thr Ala Gly Trp Asn Ile Pro Met Gly Leu Leu Phe Asn Gln
154 465             470             475             480
156 acg ggc tcc tgc aaa ttt gat gaa tat ttc agt caa agc tgt gcc cct    1488
157 Thr Gly Ser Cys Lys Phe Asp Glu Tyr Phe Ser Gln Ser Cys Ala Pro
158             485             490             495
160 ggt tct gac cca aga tct aat ctc tgt gct ttg tgt att gga gat gag    1536
161 Gly Ser Asp Pro Arg Ser Asn Leu Cys Ala Leu Cys Ile Gly Asp Glu
162             500             505             510
164 caa ggt gag aat aag tgc gtt ccc aac agc aac gag aga tac tac ggt    1584
165 Gln Gly Glu Asn Lys Cys Val Pro Asn Ser Asn Glu Arg Tyr Tyr Gly
166             515             520             525
168 tac act ggg gct ttc cgt tgc ttg gct gag aat gct gga gac gtt gca    1632
169 Tyr Thr Gly Ala Phe Arg Cys Leu Ala Glu Asn Ala Gly Asp Val Ala
170     530             535             540
172 ttt gtg aaa gat gtc act gtc ttg cag aac act gat gga aat aac aat    1680
173 Phe Val Lys Asp Val Thr Val Leu Gln Asn Thr Asp Gly Asn Asn Asn
174 545             550             555             560
176 gag gca tgg gct aag gat ttg aag ctt gca gac ttt gcg ttg ctg tgc    1728
177 Glu Ala Trp Ala Lys Asp Leu Lys Leu Ala Asp Phe Ala Leu Leu Cys
178             565             570             575
180 ctc gat ggc aaa cgt aag cct gtg act gaa gct aga agc tgc cat ctt    1776
181 Leu Asp Gly Lys Arg Lys Pro Val Thr Glu Ala Arg Ser Cys His Leu
182             580             585             590
184 gcc atg gcc ccg aat cat gct gtg gtg tct cgt atg gat aag gtg gaa    1824
185 Ala Met Ala Pro Asn His Ala Val Val Ser Arg Met Asp Lys Val Glu
186             595             600             605
188 cgc ttg aaa cag gtg ttg ctc cac caa cag gct aaa ttt ggt aga aat    1872
189 Arg Leu Lys Gln Val Leu Leu His Gln Gln Ala Lys Phe Gly Arg Asn
190     610             615             620
192 gga tct gac tgc ccg gac aag ttt tgc tta ttc cag tct gaa acc aaa    1920
193 Gly Ser Asp Cys Pro Asp Lys Phe Cys Leu Phe Gln Ser Glu Thr Lys
```

Input Set : **A:\09743823.txt**
Output Set: **N:\CRF4\03292006\I743823A.raw**

```
194 625                 630                 635                 640
196 aac ctt ttg ttc aat gac aac act gag tgt ctt gcc aga ctc cat ggc     1968
197 Asn Leu Leu Phe Asn Asp Asn Thr Glu Cys Leu Ala Arg Leu His Gly
198                 645                 650                 655
200 aaa aca aca tat gaa aaa tat ttg gga cca cag tat gtc gca ggc att     2016
201 Lys Thr Thr Tyr Glu Lys Tyr Leu Gly Pro Gln Tyr Val Ala Gly Ile
202                 660                 665                 670
204 act aat ctg aaa aag tgc tca acc tcc cca ctc cta gaa gcc tgt gaa     2064
205 Thr Asn Leu Lys Lys Cys Ser Thr Ser Pro Leu Leu Glu Ala Cys Glu
206             675                 680                 685
208 ttc cta agg aag taa                                                 2079
209 Phe Leu Arg Lys
210      690
213 <210> SEQ ID NO: 2
214 <211> LENGTH: 30
215 <212> TYPE: DNA
216 <213> ORGANISM: Artificial Sequence
218 <220> FEATURE:
219 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
221 <400> SEQUENCE: 2
222 ggatccatgg gccgtaggag aaggagtgtt                                   30
225 <210> SEQ ID NO: 3
226 <211> LENGTH: 32
227 <212> TYPE: DNA
228 <213> ORGANISM: Artificial Sequence
230 <220> FEATURE:
231 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
233 <400> SEQUENCE: 3
234 gagctccttc ggttttactt cctgaggaat tc                                32
237 <210> SEQ ID NO: 4
238 <211> LENGTH: 42
239 <212> TYPE: DNA
240 <213> ORGANISM: Artificial Sequence
242 <220> FEATURE:
243 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
245 <400> SEQUENCE: 4
246 tctagataaa ataatctata cattaaaaaa tttgatttta aa                      42
249 <210> SEQ ID NO: 5
250 <211> LENGTH: 36
251 <212> TYPE: DNA
252 <213> ORGANISM: Artificial Sequence
254 <220> FEATURE:
255 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
257 <400> SEQUENCE: 5
258 ggatccgact gagtcggata agaagaaaag aaaaga                            36
261 <210> SEQ ID NO: 6
262 <211> LENGTH: 36
263 <212> TYPE: DNA
264 <213> ORGANISM: Artificial Sequence
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RAW SEQUENCE LISTING   DATE: 03/29/2006
PATENT APPLICATION: US/09/743,823A   TIME: 10:53:54

Input Set : A:\09743823.txt
Output Set: N:\CRF4\03292006\I743823A.raw

```
266 <220> FEATURE:
267 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
269 <400> SEQUENCE: 6
270 tctagagttt tcaaatttga attttaatgt gtgttg                      36
273 <210> SEQ ID NO: 7
274 <211> LENGTH: 36
275 <212> TYPE: DNA
276 <213> ORGANISM: Artificial Sequence
278 <220> FEATURE:
279 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
281 <400> SEQUENCE: 7
282 ggatcccacc ttaaggaggt tgcaacgagc gtggca                      36
285 <210> SEQ ID NO: 8
286 <211> LENGTH: 250
287 <212> TYPE: DNA
288 <213> ORGANISM: Artificial Sequence
290 <220> FEATURE:
291 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
293 <400> SEQUENCE: 8
294 ggccgtagga gaaggagtgt tcaatggtgc gcagtatcac aaccagaggc cacaaaatgc 60
295 ttccaatggc aaaggaatat gagaaaagtt cgtggacctc ctgtatcttg cataaagaga 120
296 gattcaccca tccagtgtat ccaggcaatt gcggaaaaca gagctgatgc tgtgactctt 180
297 gatggtggtt tcatatacga ggcaggactt gccccataca aactgcgacc tgtagcggcg 240
298 gaagtctacg                                                    250
301 <210> SEQ ID NO: 9
302 <211> LENGTH: 250
303 <212> TYPE: DNA
304 <213> ORGANISM: Artificial Sequence
306 <220> FEATURE:
307 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
309 <400> SEQUENCE: 9
310 gcacctggaa cacaagaggc tgagaagaat cttgccacag ctgcctcaat gggctcaggt 60
311 ggacccgtcc aattcaagaa tggacgaagt gtccctatag ggacattcca tccagcggtc 120
312 ctgcgaagtc ctgtgtggca tgacttcaga ccttgaagtt cgttcagctg aaaagatccg 180
313 cccttcttca caacagccac agcataatag tgagttcgtg gttgtctttc ggtcccgtag 240
314 acttccgccg                                                    250
317 <210> SEQ ID NO: 10
318 <211> LENGTH: 250
319 <212> TYPE: DNA
320 <213> ORGANISM: Artificial Sequence
322 <220> FEATURE:
323 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
325 <400> SEQUENCE: 10
326 aactggctta cgagtgttgt ctgggcagag taactcatac tcgtcccttt cagcctcgtc 60
327 tgaaagatcc tcaaacactg tgctctctct aataaaagca acatctccag caccgtctct 120
328 aagacactta aaggcaccag agtagctgaa gtacggttcc tgggatgaga atgcacattt 180
329 gttttcccct gtccccgcac acaggcgaca aaggttgggg aattgtcctt tatctgcacc 240
330 tggaacacaa                                                    250
333 <210> SEQ ID NO: 11
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 03/29/2006
PATENT APPLICATION: **US/09/743,823A**   TIME: 10:53:55

Input Set : **A:\09743823.txt**
Output Set: **N:\CRF4\03292006\I743823A.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:25; N Pos. 534,763,787,789,878

VERIFICATION SUMMARY   DATE: 03/29/2006
PATENT APPLICATION: **US/09/743,823A**   TIME: 10:53:55

Input Set : **A:\09743823.txt**
Output Set: **N:\CRF4\03292006\I743823A.raw**

L:756 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:480
M:341 Repeated in SeqNo=25

VERIFICATION SUMMARY   DATE: 03/29/2006
PATENT APPLICATION: **US/09/743,823A**   TIME: 10:53:55